

REMARKS

In the Office Action dated November 5, 2009, and marked final, the Examiner maintains his rejections of claims 1, 4-6, 8-14 and 20-23 under 35 U.S.C. §103(a) as being unpatentable over Hisamitsu (2004/0126655) in view of Delnick (5,865,860); claim 3 under 35 U.S.C. §103(a) as being unpatentable over Hisamitsu in view of Delnick and in further view of Kung (5,389,471); and claims 15, 16, 24 -27 under 35 U.S.C. §103(a) as being unpatentable over Hisamitsu in view of Delnick and in further view of Triplett (3,566,985). The Examiner also rejects claim 7 under 35 U.S.C. §103(a) as being unpatentable over Hisamitsu in view of Delnick and in further view of Munshi.

Claims 2, 17-19 and 28-29 were previously canceled. With this Response, no claims are added, canceled or amended. After entry of this Response, claims 1, 3-16 and 20-27 remain pending in the Application.

This supplemental response is submitted to address the Examiner's comments in the Advisory Action dated January 11, 2010. Reconsideration is respectfully requested in light of the arguments made below.

The Examiner states in part (a) of his comments that Hisamitsu teaches layers that are formed in a predetermined pattern in paragraph [0039]. The claims require that the individual insulating particles be placed in a pattern. The claims do not require the layers be formed in a predetermined pattern as stated by the Examiner. Paragraph [0039] is reproduced in part below.

The five printer heads are for applying a positive electrode fluid for forming the positive electrode layers 211a, a negative electrode fluid for forming the negative electrode layers 211c, an electrolyte fluid for forming the electrolyte layers 211fc, a conductive fluid for forming the collector layers 212 and the electric circuit portion 300, and an insulating fluid for forming the insulating portion 400, respectively. By controlling these printer heads, each of the fluid types mentioned above is ejected onto the substrate in a predetermined pattern respectively. After a solvent contained in the fluid is evaporated and the fluid is solidified, each of the fluid types is ejected to overlay the solidified fluid in a predetermined pattern to

be formed next.

Paragraph [0040] goes on to describe Fig. 5, which shows “the patterns of the respective layers of the laminate type battery according to this embodiment, that is, ejection patterns of the fluids. The laminate type battery of this embodiment can be manufactured by forming each of the patterns shown in FIG. 5 one after another on the substrate from the first layer to the uppermost layer.” Paragraph [0041] continues to describe how the “pattern” of layers is manufactured. “First of all, the insulating fluid is ejected from the inkjet printer onto the substrate and then dried, thus forming an insulating layer serving as the lowermost layer. Next, the conductive fluid and the insulating fluid are ejected onto the insulating layer and then dried, thus forming a collecting layer 212c serving as the second layer.”

Applicants submit that clearly, based on these paragraphs and Fig. 5, Hisamitsu is referring to the pattern in which the layers are formed, not a pattern in which individual insulating particles of the electrolyte layers are formed. The Examiner is respectfully requested to reconsider.

Further in section (a), the Examiner states that Delnick teaches an electrolyte layer comprising a separator structure having a plurality of individual insulating particles such as alumina or silica. The separator layer is made of a suitable mixture of a solid particulate, such as alumina or silica, and a polymer binder. Fig. 3 shows the separator layer 208, which is clearly not a pattern of individual insulating particles with a plurality of interstitial spaces therebetween.

In section (b), the Examiner states that Delnick teaches an electrolyte layer comprising the same materials recited in claim 1. This is an incorrect statement. Delnick discloses a separator made of particles and a polymer binder, along with the electrolyte. The claims recite individual insulating particles and electrolytes. The statement regarding Hisamitsu is addressed above.

In section (c), the Examiner states that he is treating “consisting essentially of” as not excluding other elements since the structure of the separator material is further limited in

other dependent claims. This is not accurate. The material of the insulating particles and the electrolyte is further defines. The void ratio of the interstitial spaces is further defined. But no additional elements are added to the electrolyte layer in the dependent claims. That is the meaning of using "consisting essentially of." The transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976) (emphasis in original). Applicants have consistently argued that no separator is required as the individual insulating particles are arranged such that the cathode and the anode do not contact each other. Applicants' insulating particles provide means to prevent short-circuiting as the insulating particles keep the anode and cathode separate as recited in the claim, which is the role that a separator performs. (¶ [0044]). As a separator would materially affect the basic and novel characteristic of the claimed invention, the Examiner's treatment of "consisting essentially of" is erroneous.

Reconsideration of the Application is requested. It is respectfully submitted that this Response places the application in suitable condition for allowance; notice of which is requested. If the Examiner feels that prosecution of the present Application can be expedited by way of an Examiner's amendment, the Examiner is invited to contact undersigned at the telephone number listed below.

Respectfully submitted,

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